The Prevalence of Dustbornes Microorganisms in the Atmosphere in the West of Iran

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Background & Objectives: Dust storm is one of the most important natural phenomena. Microorganisms present in the dustbornes.The aim of this study was to Isolation and prevalence of dustbornes microorganisms in the atmosphere in the west of Iran.

Methods: All air samples included in this study were performed in ahvaz, Mahshar, Kermanshah between April 2011 to June 2011. one gram of dust sample and 9 ml of distilled water to get 1:10 (1× 10−1) dilution, then 1 ml from the first tube added to a new tube of 9 ml distilled water to gain 1:100 (1× 10−2) dilution. Gradually, until we obtain a 1:10,000,000 (1×10−7) dilution, then of10−5 and 10-7 dilution were cultured on MacConkey's and BHI agar mediums. All strain were identified using by gram staining and biochemical test.

Results: The results of microorganisms (isolated bacteria) were the gram-negative *Escherichia coli* (13.3%), Enterobacter (7.1%), Pseudomonas (3.1%). The gram-positive Bacillus species (71%),%), Non pathogen Staph (5.5%).

Conclusion: The results of study showed that both non-pathogenic and pathogenic microorganisms may play a significant role in through time and environmental health.

Keywords: Dustbornes; Microorganisms; Atmosphere